

WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: CO821

Title: Managed Groundwater Recharge for Habitat Restoration: The Development of a Biological Component to the South Platte Mapping and Analysis Program (SPMAP)

Focus Categories: Ecology, Hydrology

Keywords: Stream depletion factor, Augmentation, GIS, State-listed Aquatic Species, Habitat restoration

Start Date: 03/01/2001

End Date: 02/28/2002

Federal Funds: \$3,624

Non-Federal Matching Funds: \$7,251

Congressional District: 4th

Principal Investigator:

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Abstract

A series of managed groundwater recharge projects (referred to as the Tamarack Plan) is being developed in the lower South Platte River in Colorado to re-time flows to assist with water augmentation management and to provide Colorado's water contributions to a Platte River Endangered Species Program. The groundwater recharge projects developed under the Tamarack Plan divert excess river flows, using a system of wells, pipes and/or ditches, to groundwater recharge basins in upland areas. The objective of this research is to develop a rule-based expert system to identify flow related parameters for habitat benefits during various life cycle phases of several target species. The expert system will be designed for incorporation into a biological module for SPMAP, the program currently used by wildlife managers and water user groups in the South Platte Basin. The inclusion of habitat benefits in the Tamarack Plan recharge projects is a priority for the water users in the region.